

Name : L.V.RAJANI KUMARI

Designation: Assistant Professor

Department: Electronics & Communication Engineering

Mail.I.D: rajanikumari_lv@vnrvjiet.in



Experience (in years): 23 Teaching:5 Research: Others (If any, Specify):18

1. Educational / Technical qualifications:

| S.No | Level (UG / PG / Ph.D) | Year of passing | Specialization |
|------|------------------------|-----------------|--|
| 1 | Ph.D. | 2020 | Biomedical Signal Processing (Detection & Classification of Arrhythmia Beats from ECG Signals) |
| 2 | M.Tech | 2010 | Embedded Systems |
| 3 | B.Tech | 2007 | ECE |

2. Teaching and Learning:

2.1. Teaching Interests:

Microprocessor & microcontrollers, Computer organization, Switching Theory and Logic design, Embedded Systems, Digital Signal Processors & Architectures, Basic Electronics, Electronic devices & Circuits, Pulse and Digital Circuits, CPLD & FPGA, Signals & Systems, Digital Signal Processing ,DSPA

2.2. Novel Teaching & Learning Techniques adopted:

Videos, POGIL, PPT, Group Discussion

2.3. Involvement in curriculum updating / Design:

Updating the syllabus of subjects like Switching Theory & Logic Design, Microprocessors and Microcontrollers, Embedded Systems, Signals and Systems, DSPA, MPMC Lab, Digital Signal Processing, Basic simulation Lab, Processors For Embedded System Design, Introduction to signal processing, IOT

3. Co-curricular and Extra-Curricular Activities

3.1. Interests and Hobbies: Reading books, Painting, Designing and craft work, listening to music, shopping

3.2. CCA/ECA Organized:

- Arranged open house projects in convergence of 2015
- Judge in 4th national cultural festival for deaf women 2018

- Coordinator for open house projects 2016
- 3.3. CCA/ECA participated: Posters presentation in convergence 2015
- 3.4. Counseling and Mentoring Activity: Mentoring I,II, III and IV B.Tech students
- 3.5. Committees involved in:
- Department level:
- Class Coordinator for III ECE, B.Tech
 - Coordinator for Technical Seminars of M.Tech (Embedded Systems)
 - Coordinator for Comprehensive Viva of M.Tech (Embedded Systems)
 - Coordinator for Comprehensive Viva of B.Tech (ECE-2)
 - Member of B.Tech (ECE-1) project review committee
 - Member of M.Tech main & mini project review committee
 - Budget Incharge
 - Member of BOS from 2020
4. Institute Level:
- Coordinator for open house projects 2016
 - Coordinator for Open house 2017
 - Member of WISE program committee 2018- 2020.
 - Mentor and guide the students for the IUCEE Course on "Artificial Intelligence for All from 1-9-2020 to 10-11-2020
 - Coordinator for M.Tech Embedded Systems course from Dec 2020
 - Involved in the syllabus preparation of IOT related subjects in CSE-IOT
 - Coordinator of UGC and QS in the department of PAAC from 01-09-2021
5. **Conference / Workshop / Seminar / Guest Lectures:**
- 4.1 Conducted:
- Organized three days TEQIP Sponsored workshop on “Electronic Board designing Circuits” in collaboration with Indo Global Services, Hyderabad on 22nd July to 24th July 2013.
 - Organized AICTE sponsored FDP on “Real time Embedded system Development” from 18th -30th November,2013 at VNRVJIET
 - Organized TEQIP sponsored FDP on “Labview- Design & Development” 02nd june to 14th june 2014 at VNRVJIET
 - Seminar on Latest Embedded Processors
 - Organized four days TEQIP Sponsored workshop on “Real Time Applications using LabVIEW” in collaboration with National Instruments on 1st – 4th July 2015
 - Organized one week TEQIP Sponsored workshop on “MATLAB and Its Toolboxes” in collaboration with math works, Hyderabad on 14th Dec-19th 2015
 - Organized Two days TEQIP Sponsored workshop on “IOT ” in collaboration with National Instruments on 1st – 4th July 2015

- Organized Three days TEQIP Sponsored workshop on “Low Power Embedded Systems using ARM Cortex-M4F based MSP432” M/S Texas Instruments (India) Pvt. Ltd, Bangalore during 16th to 18th June 2016.
- Organized ITRA Sponsored Four Day National Level Workshop On Biomedical signal processing & its applications during 13th – 16th December 2016
- Technical session manager at 7th IEEE International Advance Computing Conference (IACC 2017) during 5th –7th Jan.2017 by VNRVJIET along with IEEE Computer Society India Council.
- Organizing committee Member of open house- 2016 & 2017
- Organized two day workshop on “IOT & Drones” from 26th -27th November,2019 at VNRVJIET in association with leadingindia.ai
- Organized five day FDP on “Deep learning and its Applications” from 09th-13th, December 2019
- Conducted two week FDP on “Advanced Optimization Techniques and Hands-on With MATLAB/SCILAB” from 13th to 24th July 2020 jointly organized by NIT Patna & MNIT Jaipur with collaboration Of VNRVJIET.(5 PM -8.30PM)
- Session Chair in IEEE 2021 International Conference on Intelligent Technologies (CONIT) during 25th h to 27th h June 2021.
- Conducted Two Weeks Online Certificate Programme on “Deep Learning and Applications” organized by VNRVJIET in collaboration with IIT Guwahati, IIT Kanpur, IIT Roorkee, MNIT Jaipur, NIT Patna, NIT Warangal and PDPM IITDM Jabalpur August 23rd to September 03rd 2021
- Mentor for the two teams which have been shortlisted for the Ideathon in Returning Mothers Conference 2021 held on Aug 24,2021
 - Organized webinar on CURRENT EMBEDDED TRENDS IN INDUSTRY on 01st August 2021
 - Organized IEEE SPS Seasonal School on “Recent advances in Artificial Intelligence for Signal Processing” during 28th -31st December 2021
 - Organized 2022 IEEE WIE International Leadership Summit (ILS-22)) is being organized by WIE AG, IEEE Hyderabad Section during 26th - 27th August, 2022.
-

4.2 Attended:

- Attended regional workshop on “Embedded Systems” during 13th-17th March, 2006
- Attended three day workshop on “Design of Embedded System Applications DESA-2007, during 26th -28th Feb ,2007
- Attended three day Short term intensive course on “Embedded architecture and applications, during 12th -14th Feb,2009.
- Attended 2 Day Faculty Development Programme On “MSP430-An Embedded Processors(FG4618/F2013)” 29th – 30th Nov 2010. Venue: Microprocessors Laboratory, VNRVJIET, Hyderabad
- Faculty development programme on Real time signal and image processing at VNRVJIET in 2011

- Attended a 5-day Staff Development Program on “DSP Processor Architectures and Programming” was organized by the Department of ECE in association with ISTE Chapter & IIPC of VNR Vignana Jyothi Institute of Engineering and Technology during 19-12-2011 to 23-12-2011.
- MATLAB & SIMULINK” FDP Organized by Dept. ECE, ISTE and IIPC of VNRVJIET in collaboration with Akademy of Design & Architecture and Math Works Bangalore during 14th to 16th March 2013
- Attended 2 Day FDP on “Application Development using ARM7 & ARM9 “, during 22nd -23rd March 2013.
- Attended 3 Day FDP on “Application Development using Embedded Controller Board “, during 8th -10th April 2013.
- Attended 3 Day workshop on “Art of Teaching” during 13-15 May,2013 at VNRVJIET.
- Attended 2 Day workshop on “Skill Upgradation on open Source Platform(linux)” during 17-18 May 2013 at VNRVJIET.
- Attended 3 Day FDP on “Signal and Image processing using Labview” during 11th to 13th November,2013 at RVR&JC,Guntur.
- Attended 12 Day FDP on “Real Time Signal Processing” during 2nd to 14th December,2013 at CBIT, Hyderabad.
- Attended 7 Day workshop on “English Language Proficiency and Personal Effectiveness” during 12th -17th May 2014 at VNRVJIET
- Attended 7 Day workshop on “ Course work on Research Methodology” at JNTUH during 08-12 december 2014.
- Attended 1 Day workshop on “HPC Code Modernization(Parallelization)” organized by C-DAC and INTEL Corporation at VNRVJIET on 10th july, 2015
- Attended 2 week AICTE sponsored FDP on “Trends in wireless Communication Technology & Evolution of simulation tools ” organized by ECE at VNRVJIET during 11th -23rd May, 2015
- Attended 2 Day workshop on “Latest Technology & Trends” organized by TCS at VNRVJIET during 20-21 August- 2015
- Attended 4 Day workshop on “Embedded Hardware, Operating Systems and IoT Applications” during 20- 23rd January 2016 at VNRVJIET
- Attended 1 Day workshop on “Advanced Programming Techniques with MATLAB” held on 16th 4eptember,2016 at JNTUH.
- Attended 3 Day workshop on” Sensor Networks and Internet of Things” organized by the E & ICT Academy,National Institute of Technology,Warangal at VNRVJIET from 27th Nov to 2nd dec. 2016.
- Attended a 2 day workshop on “IOT & Embedded Aplications” organized by VNRVJIET in collaboration with FICE Pvt.Ltd, Bangalore at VNRVJIET from 20 & 21st Feb,2017.
- Attended a 10 days FDP on “Recent trends in Signal Processing and Its Applications”, organized by Dept. of ECE ,VNRVJIET in collaboration with Electronics & ICT Academy, NIT, Warangal during 22nd June to 1st July,2017
- Attended a Two-Day Weekend Training Programme - Saptahaant Shikshak Prashikshan (SSP) on "Introduction to Machine Learning" under the national mission on education through ICT(MHRD, Govt of india) on 16th & 17th december 2017 in VNRVJIET
- Attended a 2 day workshop on Programming Xilinx Zynq SoCs with MATLAB and Simulink organized by MathWorks India Private Limited 26-Jul-2017 to 27-Jul-2017
- Attended a 3 day workshop on Signal Processing with Simulink organized by Capricot

Technologies Private Limited at MLR Institute of Technology during 23rd, 24th & 25th January 2018

- Attended a one week AICTE-ISTE sponsored workshop on “Intelligent Computing & Deep Learning” organized by VNRVJIET during 14th to 19th May 2018
- Attended a 5 days FDP on “ANN and Deep Learning”, organized by Electronics & ICT Academy, NIT, Warangal through National Knowledge Network during 11th -15th June 2018
- Attended a 3 days FDP on “Artificial Intelligence and Deep Learning”, organized by leadingindia.ai, Bennett University, conducted by SR Engineering college, Warangal during 17th -19th June 2018
- Attended a 5 days FDP on “Contemporary Research and IPR”, organized by JNTUH, during 28th Jan-1st Feb 2019
- Attended a 5 days FDP on “VLSI Chip Design Hands on using Open Source EDA”
- Attended a 5 days FDP on “Artificial Intelligence (AI)” organized by CSE dept, VNRVJIET during May 13th-18th 2019.
- Attended a 5 days FDP on Artificial Neural Networks & Deep Learning from 04-08 , November 2019 organized by AICTE-JNTUH
- Attended a 5 days FDP on “3D Printing for Industrial and Biomedical Applications” from 02-06 December 2019 organized by ELECTRONICS& ICT ACADEMY, NIT, PATNA &VNRVJIET, Hyderabad.
- Attended a 6 days FDP on “Sensor Networks and IoT” from 26-31 August 2019 organized by ELECTRONICS& ICT ACADEMY, NIT, PATNA &VNRVJIET, Hyderabad.
- Attended a 5 days FDP on "Artificial Intelligence" from 18-05-2020 to 22-05-2020 at MOTILAL NEHRU NATIONAL INSTITUTE OF TECHNOLOGY ALLAHABAD.
- Attended a 5 days FDP on "Artificial Intelligence and Machine Learning for Engineering Applications” from 8-12 june 2020 organized by VNRVJIET.
- Attended series of ML webinars from 21st june to 4th july 2020,VNRVJIET.
- Attended five day FDP on “MATLAB and its Applications in Engineering using Machine Learning and deep Learning” from 13th july to 17th july organized by G.Pullareddy Engineering College, Kurnool. (10.30 AM- 12.30PM)
- Attended five day FDP on “Research Trends in image processing with Machine Learning and deep Learning” from 20th july to 25th july organized by G.Pullareddy Engineering College, Kurnool.
 - Attend the five day PDP on “NBA in a NUTSHELL” from 27th to 31st july 2020 organized by VNRVJIET.
- Attended the 15 days Workshop on “Application of Data Science for Industrial Problems through Python” organized by JNTUK, Kakinada from 10 th -27 th august 2020.
- Attended the course on “Python Programming” by NITP from 7th to 18th September 2020
- Attended the FDP on Digital Tools for Writing, Authoring and Reviewing Manuscripts organized by E & ICT Academy NIT Patna & MNIT Jaipur from 21st September to 2 October 2020.
- Attended the Five Day ATAL FDP on Applied Data Science organizing by the University College of Engineering, JNTUK, Kakinadafrom 5th to 9th October 2020.
- Attended the PDP on mathematics for Data science from 26 th -31 st Oct.2020 by CSE dept. in association with CSI & IEEE CS chapters,VNRVJIET.
- Attended a 5-Day Professional Development Program on "Basics of Python Programming" organized by the Department of Electronics and Communication Engineering and IEEE VNR SPS Chapter , VNRVJIET from 9th to13th, November,

2020.

- Attended the IEEE SPS Summer School on Internet of Things for Biomedical and Healthcare Applications organized by VNR Vignana Jyothi Institute of Engineering and Technology and IEEE VNRVJIET Student Branch in association with IEEE Hyderabad Section, IEEE Signal Processing Society and IEEE WIE AG Hyderabad Section from 28th December to 31st December, 2020.
 - Completed the course “Python for everybody” in coursera.
 - Attended the FDP on "Introduction to Artificial Intelligence" organized by IEEE VNR SP from 22nd Feb - 1st Apr, 2021
 -
 - Attended the NPTEL 12 weeks course from 18 jan 2021 to 09 April 2021 on "An Introduction to Artificial Intelligence"
 - Attended the MathWorks Virtual Training on Machine Learning Algorithms, Deep Learning concepts from May 17th 2021-20th May 2021.
 - Attended the Five Day ATAL FDP on “Innovation in Telemedicine in Rural India enabled by advancements in Artificial Intelligence, Medical Devices and Internet of Things” organizing by R.M.K. Engineering College during june 15-19,2021
 - Attended the Five Day ATAL FDP on Role of Mathematics in Future Technologies organizing by Stanley College of Engineering and Technology for Women during july 12-16,2021
 - Completed the NPTEL Course on “An Introduction to Artificial Intelligence” during Jan-April 2021.
 - Attended ATAL FDP on Challenges in Adapting Machine Learning towards to 5G/6G Communications” from 9th -13th August 2021 organized by VNRVJIET
 - Attended the NPTEL 12 weeks course from 24th jan 2022 to 24th April 2022 on "NBA Accreditation and Teaching and learning in Engineering (NATE)"
 - Attended Online Continuing Education Program on IoT & ML for Social Relevant Applications conducted by NIT Warangal from 22-09-2022 to 27-09-2022.
 - Attended one week advanced management development programme on “Telemedicine in rural healthcare”, 16-21 January 2023 at NITW.
 - Attended and completed the NPTEL 12 weeks course from 12th jan 2023 to 29th April 2023 on " Deep Learning”.

5. Academic Contribution and Research & Consultancy:

5.1. Invited Lectures:

- Guest Lecture on ”Automated Commandoes Training System” in Convergence Workshop, 2011
- Guest lecture on “ Introduction to Arduino” in IOT workshop of convergence 2018
- Lecture on “Filter Design” in the workshop of MATLAB,SIMULINK and Digital Signal processing 2019 organized by EIE Dept, VNRVJIET.
- Lecture on “MATLAB Fundamentals” in the workshop of Fundamentals of MATLAB& SIMULINK 2019 organized by ECE Dept, VNRVJIET.
- Lecture on "Dimensionality Reduction Techniques” in the series of ML webinar,VNRVJIET on 3rd july 2020.

- Lecture on “ECG signal processing Techniques” in the IEEE SPS Summer School on Internet of Things for Biomedical and Healthcare Applications organized by VNR Vignana Jyothi Institute of Engineering and Technology and IEEE VNRVJET Student Branch in association with IEEE Hyderabad Section, IEEE Signal Processing Society and IEEE WIE AG Hyderabad Section from 28th December to 31st December, 2020.
- B.Tech students have presented their project under the guidance of Dr.L.V.Rajani Kumari titled “Deep Learning Based Smart Mask For Social Distancing” in the 5th National Level IEEE Project Competition organized by IEEE Student Branch, GSSSIETW, Mysuru on 26th June 2021 in association with IEEE Bangalore section and IEEE Mysore Subsection
- B.Tech students have presented their project under the guidance of Dr.L.V.Rajani Kumari titled “DYNAMIC FACE RECOGNITION SYSTEM USING HISTOGRAM OF ORIENTED GRADIENTS AND DEEP NEURAL NETWORK” in the 5th National Level IEEE Project Competition organized by IEEE Student Branch, GSSSIETW, Mysuru on 26th June 2021 in association with IEEE Bangalore section and IEEE Mysore Subsection.
- Involved in the NBA reviews and Institute level mock inspections to the B.Tech Automobile Engineering and M.Tech. programmes Power Electronics, Software Engineering, Structural Engineering, Advanced Manufacturing Systems.
- Involved in the NBA reviews for the departments of ECE,CSE,EEE, EIE,IT.
- Guided and Review the SAR and files preparation of MOTHER TERESA INSTITUTE OF SCIENCE AND TECHNOLOGY, Sathupally on 29-04-2022
- Reviewed all lab manuals of ECE department of MOTHER TERESA INSTITUTE OF SCIENCE AND TECHNOLOGY, Sathupally
- Reviewed all NBA files of MOTHER TERESA INSTITUTE OF SCIENCE AND TECHNOLOGY, Sathupally on 3rd &4th June 2022
- Reviewer for International Conference on Recent Trends in Electrical Electronics communication and Instrumentation (ICRTEECI 2021) during 27-28th December 2021, Hyderabad
- Reviewer for IEEE Conference on 65TH IEEE INTERNATIONAL MIDWEST SYMPOSIUM ON CIRCUITS AND SYSTEMS (MWSCAS 2022) August 7-10, 2022,Fukuoka,Japan
- Technical Reviewer in the IICAIET 2022 IEEE INTERNATIONAL CONFERENCE ON ARTIFICIAL INTELLIGENCE IN ENGINEERING AND TECHNOLOGY 13-15 September 2022, Kota Kinabalu, Sabah, Malaysia
- Reviewer for ICMACC 2022
- Track chair of Signal,Image and multimedia processing in ICMACC 2022
- Reviewer of Journal of Advances in Information Technology (scopus Indexed)
- Reviewer of Journal of Image and Graphics
- Review of Manuscript ID GCMB-2022-0995 for Computer Methods in Biomechanics and Biomedical Engineering
- Reviewer of Cybernetics and Systems journal.
- Reviewer of Digital Signal Processing Journal

5.2. Articles / Chapters published in Books: 06

5.3. Books published as single author or as editor: NIL

5.4. Projects Guided:

a) UG: 30

b) PG: 12

5.5. Research Interests: Biomedical Signal Processing and Embedded Systems.

5.6. Ph.D students: Nil

a) Enrolled:

b) Submitted:

c) Awarded:

5.7. Papers published in reviewed Journals:

| S.No | Title of the Paper | Journal Name Vol.No. PP | ISBN/ISSN No. | Impact Factor/Citation Index | National/International |
|------|--|--|---|------------------------------|------------------------|
| 1 | Intelligent Infrared Target for Training Commandos to Combat Urban Terrorism | WSEAS TRANSACTIONS on SIGNAL PROCESSING, Issue 3, Volume 7, July 2011, PP:85-91 | ISSN: 1790-5052 | 1.9 (Scopus) | International |
| 2 | Implementation of Portable ECG Data Acquisition System using ARM7TDMI | IJRIT International Journal of Research in Information Technology, Volume 1, Issue 12, December, 2013, Pg. 115-121 | ISSN 2001-5569 | 1.738 | International |
| 3 | FPGA Based Arrhythmia Detection | 3 rd International Conference on Recent trends in Computing-2015 (ICRTC)-2015, Published by Elsevier B.V in Procedia Computer Science Aug.2015, | DOI informat ion: 10.1016/j.procs.2015.07.495 | 1.26 (Scopus) | International |
| 4 | ARDUINO BASED ABNORMAL HEART RATE DETECTION AND WIRELESS COMMUNICATION | International Journal on Cybernetics & Informatics (IJCI) Vol. 5, No. 4, August 2016 | DOI: 10.5121/ijci.2016.5406 | | International |
| 5 | Real-Time Telemonitoring of | CiiT International Journal of Digital Signal | 0974- | 0.385 | International |

| | | | | | |
|----|--|--|---|-----------------|---------------|
| | Student's Stress Levels using HRV Analysis | Processing, Vol 9, No 4, April 2017 | 9705/CII T-IJ-7093/05/\$20/\$100 © 2017 CiiT | | |
| 6 | SVM to Classify Mental Stress in Driver's Using HRV Analysis | CiiT International Journal of Automation and Autonomous System, Vol 9, No 9, November - December 2017 | 0974-9659/CII T-IJ-7302/05/\$20/\$100 © 2017 CiiT | 0.501 | International |
| 7 | Comparison of Artificial Neural Networks for Cardiac Arrhythmia Classification | International Journal of Advance Engineering and Research Development, <i>Volume 4, Issue 10, October - 2017</i> | e-ISSN (O): 2348-4470 p-ISSN (P): 2348-6406 | 4.14 | International |
| 8 | Performance Evaluation of Neural Networks and Adaptive Neuro Fuzzy Inference System for Classification of Cardiac Arrhythmia | International Journal of Engineering & Technology, 7 (4.22) (2018) 250-253 | e-ISSN : 0975-4024 p-ISSN : 2319-8613 | 0.69 (scopus) | International |
| 9 | R-Peak Identification in ECG Signals using Pattern-Adapted Wavelet Technique | IETE Journal of Research | DOI: 10.1080/03772063.2021.1893229 | SCI Scopus 2.33 | International |
| 10 | Detection of Cardiac Arrhythmia using Deep CNN and optimized-SVM | Indonesian Journal of Electrical Engineering and computer science | Vol. 24, No. 1, October 2021, pp. 217~225 | Scopus | International |
| 11 | Cognitive assistant DeepNet model for detection of cardiac arrhythmia | Biomedical Signal Processing and Control | Volume 71, Part B, 2022, 103221, ISSN 1746-8094, | SCI Scopus | International |

| | | | | | |
|----|--|---|---|------------|---------------|
| | | | https://doi.org/10.1016/j.bspc.2021.103221 | | |
| 12 | Classification of ECG beats using optimized decision tree and adaptive boosted optimized decision tree | Signal, Image and Video Processing Journal SIViP (2021). | https://doi.org/10.1007/s11760-021-02009-x | SCI Scopus | International |
| 13 | Automated Sleep Apnea Classification Based on Statistical and Spectral Analysis of ECG Signals | Indonesian Journal of Electrical Engineering and computer science | Indonesia n Journal of Electrical Engineering and Computer Science Vol. 25, No. 3, March 2022, pp. 1450-1457 ISSN: 2502-4752, DOI: 10.11591/ijeecs.v25.i3.pp1450-1457 | Scopus | International |
| 14 | A new transfer learning approach to Detect cardiac arrhythmia from ECG signals. SIViP (2022). | Signal, Image and Video Processing Journal SIViP (2022). | https://doi.org/10.1007/s11760-022-02155-w | SCI Scopus | International |
| 15 | ECG beat classification using proposed pattern adaptive wavelet-based hybrid classifiers. | Signal, Image and Video Processing Journal SIViP (2023). | https://doi.org/10.1007/s11760-023-02155-w | SCI Scopus | International |

| | | | | | |
|--|--|--|---------------|--|--|
| | | | 0-023-02501-6 | | |
|--|--|--|---------------|--|--|

5.8. Papers presented at National / International conferences:

| S.No | Title of the Paper | Names of the Conference/ Seminars | National/ International | Period |
|------|---|--|-------------------------|---|
| 1 | ECG Signal Processing Using LabVIEW | International Conference on Bio-Signals, Images and Instrumentation | International | MARCH 14-16th, 2013, |
| 2 | 3-channel ECG Analyzer | International conference on Communication and Computing(ICC-2014) | International | 12 th -14 th june 2014 |
| 3 | FPGA based Arrhythmia Detection | 3rd International Conference on Recent Trends in Computing 2015 (ICRTC-2015) | International (scopus) | 12 th -13 th march 2015 |
| 4 | ECG Monitoring System Using ARM9 Web-Server | IEEE Global Conference on Communication Technologies(GCC T 2015) | International | 23rd and 24th April 2015 |
| 5 | ECG Signal Preprocessing Based on Empirical Mode Decomposition (DOI 10.1007/978-81-322-2728-1_64) | International Conference on Micro-Electronics, Electromagnetics and Telecommunications ICMEET-(2015 Published in Springer LNEE series) | International (scopus) | December 18th & 19th, 2015 |
| 6 | Analysis of Cough Sounds for Diagnosis of Respiratory Diseases | 7th IEEE International Advance Computing Conference (IACC-2017) | International | January 5-7 th , 2017 |

| | | | | |
|----|--|---|------------------------|-------------------------------|
| | | (ISBN No: 978-93-5267-908-9) | | |
| 7 | Performance Evaluation of Neural Networks and Adaptive Neuro Fuzzy Inference System for Classification of Cardiac Arrhythmia | International Conference on Innovations in Electrical, Electronics, Power, Smart Grids & Advanced Computing Technologies (IEEPS-18) | International | Feb-2018 |
| 8 | A Review on Arrhythmia Classification Using ECG Signals | 2020 IEEE International Students' Conference on Electrical, Electronics and Computer Science | International (scopus) | March-2020 |
| 9 | An Inference Engine Integrated with Health Parameters for Medical Web Platform | International Conferences on Machine Learning, IoT and BigData (ICMIB-2020) | International (scopus) | 19th and 20th September 2020. |
| 10 | Classification of Arrhythmia beats using Optimized K-Nearest Neighbor Classifier | International Conferences on Machine Learning, IoT and BigData (ICMIB-2020) | International (scopus) | 19th and 20th September 2020. |
| 11 | Design and development of the secondary energy meter for non-intrusive load monitoring using a machine learning method | IEEE 4th International conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud) (I-SMAC 2020) | International (scopus) | 7-9, October 2020 |
| 12 | Classification of Sleep Apneas using | IEEE 5th International | International (scopus) | 6-8,M |

| | | | | |
|----|---|---|------------------------|------------------------------|
| | Decision Tree Classifier | Conference on Intelligent Computing and Control Systems (ICICCS 2021) | | AY-2021 |
| 13 | KNN Based Sleep Apnea Detection using ECG signals | IEEE 2nd International Conference of Emerging Technologies 2021(INCET 2021) | International (scopus) | 21-23,M AY-2021 |
| 14 | Detection of Parkinson's Disease using Extreme Gradient Boosting | IEEE 5th International Conference on Trends in Electronics and Informatics(ICO EI2021) | International (scopus) | 3 June 2021 |
| 15 | Detection of pneumonia using Deep Learning | IEEE 5th International Conference on Trends in Electronics and Informatics | International (scopus) | 4 June 2021 |
| 16 | Machine Learning based Diabetes Detection | IEEE 6th International Conference on Communication and Electronics Systems ICCES 2021 | International (scopus) | 8-10 th july 2021 |
| 17 | DEEPLARNINGBASEDSMART MASKFORSOCIALDISTANCING | 3rd International Conference on Sustainable Communication Networks and Application ICSCN 2021 | International (scopus) | 29-30 july 2021 |
| 18 | DYNAMIC FACE RECOGNITION SYSTEM USING HISTOGRAM OF ORIENTED GRADIENTS AND DEEP NEURAL NETWORK | 3rd International Conference on Sustainable Communication Networks and Application ICSCN 2021 | International (scopus) | 29-30 july 2021 |
| 19 | Performance Evaluation of Adaptive Filtering Algorithms for Denoising the ECG Signal | 2nd International Conference on | International (scopus) | 4-6 August |

| | | | | |
|----|--|--|--|---|
| | | Electronics and Sustainable Communication Systems (ICESC 2021) | | 2021 |
| 20 | Detection of Sleep Apnea From ECG Signal Using Various Machine Learning Algorithms | 8th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics, and Computer Engineering(UP CON 2021) | International (scopus) | 11 TH -13 TH November |
| 21 | A Hybrid Approach for Enhancement of the ECG signal | 8th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics, and Computer Engineering(UP CON 2021) | International (scopus) | 11 TH -13 TH November |
| 22 | Removal of Noise from ECG Signals using Residual Generative Adversarial Network | 8th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics, and Computer Engineering(UP CON 2021) | International (scopus) | 11 TH -13 TH November |
| 23 | Automated Detection of Cardiac Arrhythmia using Recurrent Neural Network | <i>6th IEEE International Conference on Recent Advances and Innovations in Engineering (ICRAIE), 2021, pp. 1-6,</i> | doi: 10.1109/ICRAIE52900.2021.9703995. | 1-3 Dec. 2021 |

5.9. Sponsored research Projects:

| S.No | Title | Agency | Period | Grant amount | Ongoing / Completed |
|------|--|--------|---------|--------------|---------------------|
| 1 | Design and Development of System for ECG Waveform Characterization | AICTE | 3 years | 8.25 Lakh | Completed |

| | | | | | |
|--|----------------|--|--|--|--|
| | and processing | | | | |
|--|----------------|--|--|--|--|

5.10 Patents:

| S.No | Title | File Number | Status | Date of Publication | Date of Grant |
|------|---|--------------|-----------|---------------------|---------------|
| 1 | IoT Based Smart Electrical Power Plug | 2021105184 | Granted | 18-11-2021 | 30-03-2022 |
| 2 | Security System for Women Safety and Real-Time Monitoring | 202341018492 | Published | 31/03/2023 | |

5.11 Consultancy Projects:

| S.No | Title | Agency | Period | Sanctioned Amount | Ongoing / Completed |
|------|-------|--------|--------|-------------------|---------------------|
| | | | | | |

6. Awards / Honors received:

- Best project award for M.Tech Project in 2010
- Awarded second prize for M.Tech Academic excellence for the academic year 2008-10.
- Best project award for B.tech students project (2014)
- 100% result in Signals & Systems theory subject in the academic year 2014-15.
- Best project award for B.tech students (TCS) project (2015)
- Best project award for M.tech student project (2015)
- Best project award for B.tech students (TCS) project (2016)
- Top 5% in NPTEL course of “Introduction to machine learning” 2018
- Awarded Ph.D. on 8th July 2020
- B.Tech Project titled “Deep Learning Based Smart Mask For Social Distancing” is awarded as best project in the 5th National Level IEEE Project Competition organized by IEEE Student Branch, GSSSIETW, Mysuru on 26th June 2021 in association with IEEE Bangalore section and IEEE Mysore Subsection

7. **Motto:** “Go confidently in the direction of your dreams, live the life you imagined”.